

## IN THE UNITED STATES PATENT &amp; TRADEMARK OFFICE

In re application of )  
LAWRENCE A. JOHNSON )  
Method to Preselect the ) Group Art Unit 188  
Sex of Offspring ) Examiners J. Witz &  
Serial No. 07/692,958 ) D. W. Robinson  
Filed April 26, 1991 ) [2108CHA]

DECLARATION UNDER 37 CFR 1.132

Charles H. Allen deposes and states:

1. That he considers himself to be an expert in the art of preparing mammalian sperm for artificial insemination as evidenced by the attached *curriculum vitae*;
2. That he has read and is familiar with the following publications authored by Johnson et al.:

■ "Flow Sorting of X and Y Chromosome-Bearing Spermatozoa Into Two Populations," *Gamete Research* **16**:1-9 (1987);  
■ "Flow Cytometry of X and Y Chromosome-Bearing Sperm for DNA Using an Improved Preparation Method and Staining With Hoechst 33342," *Gamete Research* **17**:203-212 (1987);

■ "Flow Sorting of X and Y Chromosome-Bearing Mammalian Sperm: Activation and Pronuclear Development of Sorted Bull, Boar, and Ram Sperm Microinjected Into Hamster Oocytes," *Gamete Research* 21:1-9 (1988);

3. That in his opinion the various treatments preparatory to staining the sperm cells in each of the publications referred to in (2) would in every case cause the tails and midsections of the sperm to become severed from the sperm heads and that the plasma and acrosomal membranes surrounding the resultant sperm heads would thereby be disrupted;
4. That the treatments referred to in (3) would render the sperm cells completely nonviable and would facilitate absorption of stain such as Hoechst 33342 by the disrupted sperm;
5. That, absent any knowledge he has of the subject matter of the above-identified application, he would have expected that any extended incubation of viable sperm at temperatures within the range of 30-39° C would be detrimental to the ultimate viability of the sperm and would not be a recommended procedure;
6. That in his opinion incubation at room temperature for a period of 3-5 hours would tend to decrease viability of sperm that was intended for use in artificial insemination;

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7. That it is his understanding that treatments accorded sperm for Artificial Insemination always include cooling as soon as practicable after ejaculation to begin the slowing of sperm metabolism and that in his experience in the area of sperm physiology and artificial insemination, one would never consider incubating sperm at 30-39° C for extended time periods, because it is contrary to the maintenance of sperm viability; and

8. That all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Executed

02 Jan 1992

CH

Charles H. Allen

Charles H. Allen

Short Curriculum Vitae of C. H. Allen

Education:

The Pennsylvania State University, B.S. (Animal Science) - 1978  
The Pennsylvania State University, M.S. (Dairy Science) - 1981

Professional Experience:

- 1978-1981 Research Assistant, The Pennsylvania State University  
Full-time employee, part-time graduate student, research work involved nutritional and management factors to maximize sperm harvest, effects of freezing methods and extenders on seminal quality, and thawing methods to maximize spermatozoal recovery.
- 1981-1989 Quality Control Manager, Atlantic Breeders Cooperative  
Responsible for processing procedures and daily laboratory operations to Operations Director.
- 1989-Present Operations Director, Atlantic Breeders Cooperative  
Responsible for sire procurement, housing, semen production, semen processing, sire evaluation and sire health to Chief Executive Officer.

Industrial Experience:

- 1982-Present National Association of Animal Breeders  
Research Committee, elected Chair 1990-1991
- 1988-1989 National Association of Animal Breeders  
Animal Management Practices Committee

Publications:

- Allen, C. H. and J. O. Almquist. 1981. Effect of bulk freezing straws of bovine spermatozoa in a programmed freezer on post-thaw survival. *J. Anim. Sci.* 53:1432.
- Almquist, J. O., C. H. Allen and R. J. Branas. 1982. Effect on fertility of freezing large numbers of straws of bovine spermatozoa in a mechanical freezer. *J. Anim. Sci.* 55:232.
- Kellgren, H., C. Lidbury, M. Cowan, C. Allen. 1982. Laboratory Structure. pp. 76-79. In Proceedings, 9th Technical Conference on Artificial Insemination and Reproduction, National Association of Animal Breeders, Milwaukee, WI.
- Bousquet, D., M. A. Dressel, C. H. Allen and B. G. Brackett. 1982. Efforts to relate lab and field observations on bull sperm fertility. *Biol. Reprod.* 26 (Suppl. 1) 1963, 118A.

Garner, D. L., L. A. Johnson and C. H. Allen. 1986. Flow cytometric comparison of cryopreserved bovine spermatozoa processed in egg-yolk and milk diluents. pp. 122. In Proceedings, 11th Technical Conference on Artificial Insemination and Reproduction, National Association of Animal Breeders, Milwaukee, WI.

Schenk, J. L., R. P. Amann and C. H. Allen. 1987. Effects of extender and insemination dose on postthaw quality and fertility of bovine sperm. J. Dairy Sci. 70:1458.

Professional Society:

American Dairy Science Association  
American Society of Animal Science  
Gamma Sigma Delta (Agricultural Research Honorary)